

1 CLAIMS

2 We claim:

- 3 1. A method for locating position for a mobile commutation device, comprising:
- 4 inputting geo-indicators (Gi-1, Gi-2, ..., Gi-n) based on text by a user with the mobile
- 5 commutation device;
- 6 transmitting the geo-indicators to a back end server;
- 7 generating a candidate feature set for each geo-indicator by applying geocoding which
- 8 maps the text address to a geo-location based on a back end spatial database;
- 9 deciding the final geo-location information by geocustering the candidate feature set; and
- 10 transmitting the geo-location information to the mobile communication device.
- 11 2. A method for locating position for a mobile communication device according to
- 12 claim 1, wherein the geo-indicators (Gi-1, Gi-2, ..., Gi-n) are based on text inputted by
- 13 the user with the mobile commutation device, Gi-j is an item selected from a group of
- 14 items including: a street name, a building name, a postal code, a telephone number, and
- 15 any combination of these.
- 16 3. A method for locating position for a mobile communication device according to
- 17 claim 1, wherein the geo-indicators (Gi-1, Gi-2, ..., Gi-n) are based on text inputted by
- 18 the users with the mobile commutation device, Gi-j is selected from a group including an

- 1 abbreviation of a street name and/or a building name, a local code of a postal code, a
2 telephone number, and any combination of these.
- 3 4. A method for locating position for a mobile communication device according to
4 claim 1, wherein said candidate feature set is a set of points determined from an item in a
5 group of items including: a building name, a set of lines determined by a road name, a
6 polygon determined by a postal code, a telephone number, and any combination of these.
- 7 5. A method for locating position for a mobile communication device according to
8 claim 1, wherein said candidate feature set is labeled with a confidence level.
- 9 6. A method for locating position for a mobile communication device according to
10 claim 5, wherein the geometry relationship and confidence level is taken into account
11 when geocustering said candidate feature set.
- 12 7. A method for locating position for a mobile communication device according to
13 claim 1, further comprising a step of feeding back a choice made by the user and/or
14 adding an additional geo-indicator inputted by the user, in order to locate said position
15 precisely.
- 16 8. A system for locating position for a mobile commutation device, comprising:
17 a mobile communication device , for inputting geo-indicators (Gi-1, Gi-2, ..., Gi-n) based
18 on text;
19 geo-location generating means, for generating a candidate feature set for each
20 geo-indicator by applying geocoding which maps the text address to an geo-location
21 based on a back end spatial database; and
22 clustering means, for deciding the final geo-location information by geocustering the
23 candidate feature set.

1 9. A system for locating position for a mobile communication device according to
2 claim 8, wherein said mobile communication device is a WAP phone or a PDA.

3 10. A system for locating position for a mobile communication device according to
4 claim 8, wherein the geo-indicators (Gi-1, Gi-2, ..., Gi-n) based on text inputted by the
5 user with the mobile commutation device, Gi-j is selected from the group of items
6 including: a street name, a building name, a postal code, a telephone number, and any
7 combination of these.

8 11. A system for locating position for a mobile communication device according to
9 claim 10, wherein the geo-indicators (Gi-1, Gi-2, ..., Gi-n) based on text inputted by the
10 user with the mobile commutation device, Gi-j could be an abbreviation of a street name
11 and a building name, or the local code of a postal code and a telephone number.

12 12. A system for locating position for a mobile communication device according to
13 claim 8, wherein said candidate feature set could be a set of points determined by a
14 building name, a set of lines determined by a road name, or a polygon determined by a
15 postal code or a telephone number.

16 13. A system for locating position for a mobile communication device according to
17 claim 8, wherein said candidate feature set is labeled with a confidence level.

18 14. A system for locating position for a mobile communication device according to
19 claim 13, wherein the geometry relationship and confidence level is taken into account
20 when geocustering said candidate feature set.

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1 15. A system for locating position for a mobile communication device according to
2 claim 8, further comprising result feedback means wherein a choice is made by the user
3 or an additional geo-indicator is inputted by the user in order to locate the position
4 precisely.

5 16. An article of manufacture comprising a computer usable medium having computer
6 readable program code means embodied therein for locating a position for a mobile
7 commutation device, the computer readable program code means in said article of
8 manufacture comprising computer readable program code means for causing a computer
9 to effect the steps of claim 1.

10 17. A program storage device readable by machine, tangibly embodying a program of
11 instructions executable by the machine to perform method steps for locating a position for
12 a mobile commutation device, said method steps comprising the steps of claim 1.

13 18. A computer program product comprising a computer usable medium having
14 computer readable program code means embodied therein for causing a system for
15 locating position for a mobile commutation device, the computer readable program code
16 means in said computer program product comprising computer readable program code
17 means for causing a computer to effect the functions of claim 8.